Does Mutual Fund Ownership Affect Financial Reporting Quality for Chinese Privately-Owned Enterprises?

Does mutual fund ownership affect financial reporting quality for Chinese privately-owned enterprises?

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Abstract:

This paper examines the role of mutual funds in enhancing financial reporting quality in China. Mutual funds are more sophisticated and influential than individual investors. Therefore, they are expected to be more effective at preventing executives from expropriating investors and manipulating earnings as a cover-up, which in turn would reduce the incidence of modified audit opinions (MAOs). Our results, based on the Chinese listed firms from 2003 to 2008, confirm this prediction. More importantly, the effects of mutual fund ownership in reducing the incidence of MAOs are greater among privately owned enterprises (POEs), and especially those with higher growth. This is because POEs rely more heavily on the capital market for financing than do state-owned enterprises (SOEs), and because growth opportunities need to be funded by additional external capital. This finding implies that mutual funds form an important part of the external governance mechanism in emerging countries, but this effect is moderated by state control and ownership.

Keywords: Institutional ownership, financial reporting quality, mutual fund ownership, modified auditor opinion, China.

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1. Introduction

We study the effect of institutional investors on financial reporting quality in an emerging country by examining the relationship between mutual fund ownership and the issuance of modified auditor opinion (MAO) among Chinese firms. There has been a steady rise in the mutual fund industry across the world since the 1990s. Over the period from 1992 to 1998, for instance, the total assets of US mutual funds grew from 1.6 to 5.5 trillion USD (Klapper et al., 2004). In China, the mutual fund industry has also experienced high growth since it began in the early 2000s. Over the period from 2005 to 2007, for example, the total net value of Chinese mutual funds increased from 58.6 to 236.3 billion USD (Yuan et al., 2008). The two main benefits mutual funds offer individual investors are the diversification of investment risks and the expertise to monitor the firms they invest in. The latter function essentially qualifies institutional investors such as mutual funds to serve as an external governance mechanism. The governance role of institutional ownership has been widely examined and confirmed in Western developed economies (e.g. Shleifer and Vishny, 1986; Smith, 1996). However, little is known about either its role in enhancing financial reporting quality, and its contribution in emerging countries such as China, where investor protection and legal enforcement are weak, is under-researched. Our study fills these gaps.

Auditing, which serves as an external monitoring mechanism to constrain manager's opportunistic behavior that results from the separation of ownership and control, can reduce information asymmetry between managers and external investors (Kinney and Martin, 1994). Auditors communicate with users of financial statements through their opinion expressed in the auditor's report; a clean opinion indicates that the financial reports are prepared in accordance with accounting standards and do not contain fundamental uncertainties that will need to be clarified later. When firms carry out earnings management, the likelihood of receiving a MAO is higher (e.g. Datar

et al., 1991; Caramanis and Lennox, 2008; Chen et al., 2013). Auditors issue MAOs in order to raise the alarm regarding any questionable accounting disclosures they detect (e.g. DeAngelo, 1991; Krishnan et al., 1996). In this study, we assume the issuance of a MAO by the auditor of a firm to be an *ex post* manifestation of low financial reporting quality.[2]

The rationale for the influence of mutual fund ownership on the likelihood of firms receiving MAOs is as follows. As large shareholders, mutual funds are more capable of persuading managers against decisions that could reduce firm value or expropriate investor wealth, and disciplining them when they do take such decisions (e.g. Kaplan and Minton, 1994; Hartzell and Starks, 2003). Better monitoring and governance reduces the opportunity for managers to pursue self-serving behavior. This in turn reduces the need for them to manipulate earnings to window dress their performance and conceal their misconduct (e.g. Klein, 2002; Armstrong et al., 2012). Therefore, to the extent that institutional investors act as an external governance mechanism and reduce the information asymmetry between managers and investors, we expect an inverse relationship between mutual fund ownership and the likelihood of a firm receiving a MAO.

In the context of China, one possible hindrance to external governance mechanisms through institutional investors such as mutual funds is the state ownership and control of firms in China. State-owned enterprises (SOEs) are expected to carry out the social or political objectives of the government, and focus less on shareholder wealth maximization objectives. In return, such firms receive greater financial assistance from the state through favorable loans from state banks as well as subsidies (e.g. Allen et al., 2005; Chen et al., 2010). This financial assistance renders SOEs less dependent on the capital market for financing, which in turn reduces their accountability to investors.

[2] MAOs are interpreted as a signal of low financial reporting quality from the viewpoint of financial statement users such as the investors. For example, using data on Chinese listed firms, Chen et al. (2000) show negative abnormal stock returns over a three-day window centered on the announcement of a MAO, which suggests that firms receiving MAOs experience increased costs of capital.

Meanwhile, privately owned enterprises (POEs), which in China tend to be entrepreneurial firms, are more reliant on the capital market for funding. As a result, such firms are expected to be more responsive to the demands of outside investors. Existing empirical evidence suggests that managerial remuneration is more sensitive to stock return performance (Firth et al., 2006; Hou et al., 2013), and the cost of equity is more sensitive to audit quality (Chen et al., 2011), among privately controlled listed firms than their state-controlled counterparts in China. Therefore, state ownership is expected to moderate the governance effect of institutional investors. In other words, we expect the inverse relationship between mutual fund ownership and MAO to be more pronounced among POEs.

To test our assertions, we empirically analyze a sample of Chinese listed firms, with 8,231 firm-year observations over the period from 2003 to 2008. We obtain data on MAOs issued to Chinese listed firms from the China Securities Market & Accounting Research (GTA/CSMAR) database. To measure the influence of fund ownership, we apply both open- and closed-end funds. In both cases, we observe consistently and significantly negative relationships between MAO issuance and mutual fund ownership. This is in line with greater financial reporting quality among firms for which institutional investors are more influential as an external governance mechanism. Furthermore, we observe that this effect is more pronounced among POEs than SOEs, and especially among those with higher growth opportunities. This is consistent with institutional investors having more influence over the transparency of firms that are more dependent on the capital market for funding. Our findings are robust to the control of firm characteristics, governance, industry and regional effects, as well as the potential endogeneity between fund ownership and financial reporting quality.

Our study contributes to the corporate governance literature in two ways. First, institutional investors can help promote financial reporting quality in transitional economies such as China. In an institutional environment with weaker legal enforcement and shareholder protection, the external governance role played by institutional ownership is especially important. Second, state control of

listed firms moderates the benefits of external governance mechanisms such as that provided by institutional investors. Therefore, despite some studies suggesting that Chinese SOEs are adapting well to the new market-based economy (e.g. Lin and Germain, 2003; Ralston et al., 2006), our findings suggest that state ownership impedes the benefits provided by institutional investors. Our study has two policy implications. First, institutional investors such as mutual funds should be further encouraged to improve corporate governance and transparency in emerging economies. The expertise and experience of foreign institutional investors may be especially useful. Second, a further reduction of the state influence over listed firms in China could be considered so as to strengthen the capital market's function in disciplining firms and allocating financial resources effectively.

This study is organized as follows. Section 2 reviews the literature and develops the testable hypotheses. Section 3 explains our methodologies and sample. Section 4 presents and analyzes our empirical findings. Section 5 concludes.

2. Literature review and hypotheses

2.1 Effect of large shareholders on corporate governance

Due to the separation of ownership and control, managers have the opportunity and the incentive to expropriate wealth at the expense of the shareholders. On the one hand, dispersed ownership exacerbates agency problems because shareholders are not effective or influential enough to dissuade managers from engaging in self-serving behaviors (e.g. Jensen and Meckling, 1976). On the other hand, concentrated ownership induces two opposing effects on corporate governance, namely the entrenchment effect and the incentive alignment effect.

The entrenchment effect of large shareholders is conceptually similar to that of managers with a

high degree of ownership. Existing literature suggests that such managers have a greater incentive to pursue their own interests because shareholders have relatively lower power to influence and monitor them (e.g. Morck et al., 1988; Stulz, 1988; McConnell and Servaes, 1990). In the same way, large shareholders who gain effective control of a firm's management also have greater incentives to pursue their own interests at the expense of minority investors (e.g. Shleifer and Vishny, 1997). Empirical studies document that firms' market values decline when the control rights of large shareholders exceed their cash-flow rights (Claessens et al., 2002), and that controlling shareholders engage in "tunneling" to transfer both assets and profits out of the firm for their own benefit (Johnson et al., 2000).

The incentive alignment effect of large shareholders arises when they share with minority shareholders the objective to maximize the market value of the firm. Existing literature (e.g. Shleifer and Vishny, 1986; Maug, 1998, Noe, 2002) suggests that large shareholders have more resources and expertise than individual investors when it comes to monitoring managers. Gomes (2000) also suggests that ownership concentration signals reputation-building by the controlling shareholders. In this context, large shareholders would lose more from their firm's decline in market value than they could gain by diverting their firm's cash flow to themselves. Empirical studies document that institutional ownership is positively related to various measures of firm performance (McConnell and Servaes, 1990; Del Guercio and Hawkins, 1999), that managerial remuneration tends to be tighter among firms with larger shareholders (Bertrand and Mullainathan, 2001; Hartzell and Starks, 2003), and that such firms are associated with greater managerial accountability (Kaplan and Minton, 1994; Kang and Shivdasani, 1995).

Existing empirical studies suggest that large shareholders such as mutual funds tend to be associated with the incentive alignment effect (e.g. Admati et al., 1994). For instance, the studies of Cornett et al. (2007), Yuan et al. (2008) and Ding et al. (2013) document the positive effects of mutual

fund ownership on firm performance and stock informativeness, while Morgan et al. (2009) observe that mutual funds vote more affirmatively for wealth-increasing proposals. On the other hand, empirical studies show that large shareholders that represent the state tend to exert an entrenchment effect. For instance, Chinese SOEs are observed to have lower share price informativeness (Gul et al., 2010), CEO turnover-to-performance sensitivity (Conyon and He, 2008), CEO pay-to-performance sensitivity (Firth et al., 2006; 2007), and performance (Chen et al., 2008). Thus, mutual fund ownership and state ownership in China are expected to have opposing effects on corporate governance.

2.2 The effect of corporate governance and information transparency

The relationship between the corporate governance and information transparency of firms is well established in the literature based on Western capital markets. Dechow et al. (1996) show that earnings management is more likely among firms with fewer outside block holders or with boards of directors dominated by the management. Klein (2002) finds lower abnormal accruals among firms with board or audit committee independence. Ajinkya et al. (2005) observe more accurate management earnings forecasts among firms with greater board independence or institutional ownership. Kelton and Yang (2008) show a positive relationship between corporate governance mechanisms and financial reporting quality as measured through disclosure on the Internet. Armstrong et al. (2012) document that the enactment of state anti-takeover laws in the US invoked a reduction in information asymmetry and an improvement in financial statement informativeness.

Similar supportive findings of a positive relationship between corporate governance and firm transparency are documented even in transitional economies such as China. Ding et al. (2007) show that state-controlled firms, which have weaker protection for minority shareholders than privately controlled firms, are associated with a higher level of earnings management. Firth et al. (2007) show

greater earnings informativeness among firms with a higher proportion of foreign shareholders and tradable shares. Wang et al. (2008) indicate that firms in less developed regions, which have weaker investor protection and legal enforcement, are more likely to select smaller auditors. Hou et al. (2012) demonstrate that, since the Split Share Structure Reform, which has improved the corporate governance incentives of state shareholders, there has been an increase in share price informativeness among state-controlled listed firms.

2.3 Hypothesis development

The literature review presented above highlights two core issues related to our study. First, the external monitoring effect provided by institutional investors such as mutual funds is expected to improve corporate governance. Second, firms with better corporate governance are expected to be associated with greater transparency and less information asymmetry. We merge these issues to examine whether the propensity of Chinese listed firms to receive MAOs is reduced by mutual fund ownership, and whether this effect is moderated by state ownership.

The inverse relationship between mutual fund ownership and MAO is expected for the following reasons. First, investors attach a higher discount rate to firms associated with greater information asymmetry. This directly decreases the market value of securities issued by less transparent firms, which in turn deteriorates the performance of mutual funds that invest in such securities. Poor disclosure by firms may also have an indirect negative impact on the reputation of the stock selection skills of fund managers who invest in them. Due to these vested interests, mutual funds are expected to have an incentive to actively monitor firms and put pressure on them not to engage in opportunistic behaviors, including earnings manipulation that could reduce the wealth of the shareholders. Second, mutual fund managers are considered to be more sophisticated and to have more expertise than individual investors. They hire their own buy-side analysts to assess firms, which

reduces the possibility of collusion between sell-side analysts and firms. As a result, they are more capable of detecting earnings manipulation instigated by managers seeking to cover up misdemeanors and expropriation. Third, as large shareholders, mutual funds have greater voting power, more influence over the board, and a greater impact on share price movements than dispersed individual investors. This makes them more able to discipline firms and deter them from engaging in the managerial opportunism that can cause poor disclosure and information transparency. With greater incentives, expertise, and power, mutual funds are more likely to exert a positive influence on financial reporting quality, helping to avoid whistle blowing by auditors through MAOs. Thus, we hypothesize that:

H1: Mutual fund ownership helps to reduce the incidence of modified audit opinion.

Firms that are more dependent on the capital markets for funding are likely to be more concerned about the opinions of external investors. In the context of China, the reliance on capital market funding varies between SOEs and POEs. SOEs tend to receive more government financial assistance, and are expected to pursue social and political objectives which do not necessarily maximize shareholder wealth. On the contrary, POEs, which are often entrepreneurial firms, depend more on capital market for financing, and are therefore more responsive to the demands of external investors. Thus, the influence of mutual funds in promoting financial reporting quality is expected to be greater among POEs since they are more sensitive to investors' opinions. A reduction in the market value of securities due to information asymmetry will have a greater impact on POEs since they are more dependent on the capital markets. As such, the power of institutional investors to influence managerial decisions and monitor for managerial opportunism is also expected to be greater among POEs. If it is indeed the demand for external capital that renders the financial reporting quality of POEs more sensitive to institutional investor ownership, then we would also expect this effect to be more pronounced among those with higher growth. This is because POEs with higher growth are

likely to have a greater demand for capital to finance their investment opportunities than their lower-growth counterparts. In other words, we expect the disciplining effect of external governance on financial reporting quality to be greater among high-growth entrepreneurial firms. Given these arguments, we hypothesize that:

H2: The negative effect of mutual fund ownership on the incidence of modified audit opinion is more pronounced among Chinese POEs than SOEs.

H3: Evidence consistent with hypothesis H2 is more pronounced among POEs with higher growth opportunities.

3. Research design

To test our hypothesis H1, which predicts a negative relationship between MAO and mutual fund ownership, we apply the following probit model:

$$MAO_t = \alpha_0 + \alpha_1 Fund_{t-1} + \alpha_2 POE_{t-1} + Firm\_controls_{t-1} + Governance\_controls_{t-1} + Region + Industry + \varepsilon_t \quad (1)$$

where the modified audit opinion variable (*MAO*) represents an *ex post* manifestation of financial reporting quality and is a dummy indicator equal to one if the auditor issues a MAO to firm *i* in year *t*, and zero otherwise. We follow prior literature (e.g., Firth et al., 2011) and classify audit opinions that are qualified, disclaimer or adverse opinion as MAOs. The one-year-lagged independent variable *Fund* represents the degree of mutual fund ownership. We use the following three measures of fund ownership: the ratio of open fund ownership to freely-traded shares (*OFOF*); the ratio of closed-end fund ownership to freely-traded shares (*CFOF*); and the ratio of total fund ownership to freely-traded

shares (*TFOF*). *POE* is a binary variable that equals one for firms that are not controlled by the state, and zero otherwise. The marginal effect of α_1 in Equation (1) indicates the relationship between the likelihood of receiving MAOs and mutual fund ownership, and to support our hypothesis H1, we expect it to be negative, showing the effect of mutual funds' influence in the previous year on the incidence of MAO in the current year.

We incorporate the following one-year-lagged control variables of firm characteristics (*Firm_controls*): *Size* is the natural logarithm of market capitalization. *PB* is the price-to-book ratio, which proxies for growth. *ST* equals one if a listed firm experienced losses in the previous two consecutive years, and zero otherwise. Chinese listed firms are delisted if they report losses for three consecutive years. *Foreign* is the ratio of foreign shares, that is, owned by foreign investors, to total shares. *Analyst* is the number of financial analysts following the firm. *OwnCon*, which measures the ownership concentration, is the Herfindahl index of the top 10 block holders. *Big4* is a dummy variable that equals one if the firm is audited by one of the Big 4 auditors (i.e., Ernst & Young, KPMG, PriceWaterhouseCoopers and Deloitte), and zero otherwise.[3]

We also control for one-year-lagged corporate governance variables (*Governance_controls*) in our analyses. Previous studies suggest that boards with a high percentage of independent directors and more frequent meetings can more effectively safeguard the interests of the shareholders (e.g., Beasley, 1996; Adams, 2003). We consider the effect of the following board features. *Duality* is a dummy indicator, which takes the value of one if the CEO of the firm also holds the position of chairman of the board, and zero otherwise. *Meet* represents the meeting frequency of the board. *BSize* is the number of board members. *Indep* is the percentage of independent directors. *SBsize* is the

[3] In China, Big 4 auditing firms are legally required to launch a joint venture with a local firm in order to provide it with auditing services. We classify an auditing service as provided by one of the Big 4 if one of the firm's partners is a Big 4 auditing firm.

number of supervisory board members.

We also control for region and industry fixed effects in our analyses. The industry fixed effect addresses the possible influence of cross-sectional variations in sector-specific factors on our analysis. We define industry according to the first two digits of the Global Industry Classification Standards (GICS). We include the region fixed effect to address the potential influence of differentiated levels of market and institutional development across China.[4] Following Firth et al. (2006), we classify firms into four different regions based on their level of economic and institutional development. We summarize the variable definitions in Table 1.

[Insert Table 1 here]

To test hypothesis H2, which predicts that the inverse relationship between MAO and mutual fund ownership will be more pronounced among POEs, we apply the following probit model with an interaction term between *POE* and *Fund*:

$$MAO_t = \beta_0 + \beta_1 Fund_{t-1} + \beta_2 POE_{t-1} + \beta_3 Fund_{t-1} \times POE_{t-1} + Firm\_controls_{t-1} + Governance\_controls_{t-1} + Region + Industry + \varepsilon \quad (2)$$

where the marginal effect of Fund (β_1) indicates the impact of mutual fund ownership on the incidence of MAO in SOEs, while the marginal effect of the interaction between *Fund* and *POE* (β_3) indicates the incremental effect in POEs compared to firms in general. To support hypothesis H2, we expect to document a significantly negative β_3 suggesting that the effect of mutual fund ownership is more pronounced in POEs than SOEs.

[4] For example, the market development in the east is more advanced than in the central and western provinces (Fan and Wang, 2004). It is recognized that institutional and market development has a significant impact on financial reporting quality (Firth et al., 2012; 2011).

To test hypothesis H3, we partition the sample into high and low-growth sub-samples based on the median level of the price-to-book ratio and replicate the test using Equation (2). Since firms with higher growth have more demand for investment capital, they should be more sensitive to the disciplining and monitoring effect of institutional investors. To support hypothesis H3, we expect to document a significantly negative marginal effect of the interaction between *Fund* and *POE* (β_3) in the high-growth sub-sample, but an insignificant marginal effect in the low-growth sub-sample.

4 Empirical results

4.1 Sample and descriptive statistics

The dummy variable POE is collected from the database of the China Centre for Economic Research (CCER/Sinofin), and the rest of the data used in this study are collected from the CSMAR/GTA database. Our sample consists of 8,231 firm-year observations, among which 773 MAOs are identified over the period from 2003 to 2008.

Table 2 provides the descriptive statistics of the variables used in our analyses, and compares the sub-samples of firm-year observations with and without MAO issuance. The former group accounts for 9.38% of our full sample. For both sub-samples, we find that the ownership level by open-end funds is greater than that by closed-end funds. Consistent with prior literature (e.g., Chen et al., 2000), firms that receive MAOs have smaller market capitalization, and are likely to be associated with Special Treatment status. Firms that receive MAOs also tend to be POEs, tend to be followed by fewer analysts, and tend not to use Big 4 auditing firms. In terms of corporate governance features, we find that firms that receive MAOs are more likely to have the same person as CEO and chairman, a smaller ratio of independent directors, and less frequent board meetings. These findings are consistent

with the view that internal governance factors such as board activity and board independence contribute to high financial reporting quality.

[Insert Table 2 here]

Table 3 presents the Pearson correlation analysis for the main variables. In favor of our hypothesis H1, *MAO* is negatively correlated with all measures of mutual fund ownership, suggesting that external monitoring by institutional investors reduce the incidence of MAO. Consistent with Wang et al. (2008), we find *MAO* to be positively correlated with *POE*. Other variables such as *Size*, *Analyst*, *OwnCon*, and *Big4* are negatively correlated with *MAO*, which suggests that firms that are larger, have less concentrated ownership, are followed by more analysts, and are audited by Big 4 auditors are less likely to receive MAOs. The *MAO* measure is also negatively correlated with *Meet* and *Indep*, which indicates that active boards and independent boards may effectively constrain managerial opportunism, leading to a lower possibility of receiving a MAO. The correlation between *MAO* and *ST* is positive, implying that firms experiencing consecutive losses have greater incentives to manipulate earnings to avoid being delisted. All measures of fund ownership are negatively correlated with *POE* and *ST*, while being positively correlated with *Size*, *PB*, and *Analyst*. This suggests that mutual funds have higher ownership of firms that are larger, higher growth, and followed by more analysts, but are less likely to invest in POEs and firms that experience consecutive losses. In addition, we find that POEs are generally smaller firms with high growth potential.

[Insert Table 3 here]

4.2 Test of Hypothesis 1

Table 4 presents our results for the test of H1 based on the marginal effects of the probit

regression analyses specified in Equation (1), and three different measures of fund ownership. The marginal effects at the means (i.e. dy/dx) are reported. The marginal effect of *Fund* is significantly negative across all regressions, indicating that fund ownership in the previous year contributes to better financial reporting quality in the current year, which supports our hypothesis H1. The results are robust after controlling for firm-specific and governance variables, and both region and industry fixed effects. Turning to the control variables, the marginal effect of *POE* is positive and significant in all regressions, which implies that POEs are more likely to receive MAOs and is consistent with the findings documented in Wang et al. (2008). As state-controlled firms are economically protected by the central or local government, auditors are less likely to issue MAOs for these firms. We find that larger firms and those followed by more analysts are less likely to receive MAOs, while firms experiencing consecutive losses are more likely to receive them. The marginal effect of *Big4* is insignificant, which suggests that higher-quality auditors do not necessarily issue more MAOs. In China, firms with higher financial reporting quality are more likely to select Big 4 auditors, and firms with lower financial reporting quality are more likely to appoint less independent auditors, who in turn are less likely to issue MAOs. As such, the likelihood of Big 4 issuing MAO is not necessarily higher. Regarding the corporate governance controls, the marginal effects of *Meet* and *Indep* are significantly negative, suggesting that board meeting frequency and the percentage of independent directors are negatively associated with the incidence of MAO, consistent with the role of internal governance in ensuring financial reporting quality.

[Insert Table 4 here]

4.3 Test of Hypothesis 2

Panel A of Table 5 presents the results based on the marginal effects of probit regressions specified in Equation (2), testing hypothesis H2. The marginal effects at the means are reported.

Throughout Panel A of this table, the marginal effects of the interaction term *Fund×POE*, which captures the impact of fund ownership of POEs in reducing the frequency of MAO, are significantly negative. For instance, in Regression II, when fund ownership is proxied by the open-end fund ownership ratio, this marginal effect is -0.338 (p-value = 0.035). The results support H2 and are also economically significant in that a one-standard-deviation increase in the *OFOF* (11.78%) leads to a 4% decrease in the incidence of MAOs. Capturing the effect of fund ownership in SOEs, the marginal effect of *Fund* is not always significantly negative. We therefore argue that institutional investors, through mutual fund ownership, play a significant role in strengthening the financial reporting quality of POEs. This is because POEs are more dependent on the capital markets and more concerned about the views of external investors. In contrast, SOEs are under less pressure from monitoring by external investors because they enjoy preferential treatment from central and local government. Our results remain consistent under alternative measures of fund ownership such as the closed-end fund ownership and total ownership ratios.

The findings regarding the effects of the control variables in Panel A of Table 5 are broadly similar to those in Table 4. The marginal effect of *Size* is negative and significant across the models, suggesting that larger firms are less likely to receive MAOs. The marginal effect of *ST* is positive and significant in all regressions, consistent with the expectation that firms experiencing consecutive losses have greater incentives to manipulate earnings to avoid being delisted, which results in the issuance of MAOs. The marginal effect of *Analyst* and *OwnCon* are negative and significant across the models, indicating that firms followed by more analysts and those with high ownership concentrations are less likely to receive MAOs. Finally, among the governance variables, the marginal effects of *Meet* and *Indep* are significantly negative, while the marginal effect of *Bsize* is significantly positive in all regressions, which implies that active, independent, and larger boards are more effective in constraining earnings management and therefore contribute to higher financial reporting quality. The findings are consistent with the view that independent directors have incentives

to be effective monitors so as to maintain their reputational capital (Fama and Jensen, 1983), and with the view that frequent boards meetings are a signal of increased vigilance and monitoring of managerial behavior, meaning that the interests of shareholders are well protected (Adams, 2003).

In our analysis we use lagged explanatory variables to mitigate the endogeneity concern. In order to further address this concern, we present additional robustness tests based on an instrumental variable (IV) approach in Panel B of Table 5. Yuan et al. (2008) suggest a number of instruments in their study of the impact of fund ownership on firm performance, including the lagged proportion of tradable A-shares, the prior year's stock turnover calculated as the ratio of trading volume to the total number of freely traded shares, the lagged indicator of Shanghai 180 or Shenzhen component indices, lagged firm leverage, the standard deviation of monthly stock returns, and a dummy variable for positive operating profits. Not all of them could be used as instruments in our setting because some are associated with the incidence of MAO. It is likely that operating performance and analyst following are correlated with the incidence of MAO in that firms experiencing consecutive negative profits tend to inflate their earnings to avoid being delisted by the stock exchange. Chen et al. (2012) find that financial analysts form a part of the external governance mechanism and play a monitoring role, helping to reduce the incidence of MAO. In addition, leverage and index inclusion may reflect the external monitoring from creditors and the stock exchange respectively, which may help to reduce the incidence of MAO. Therefore, our additional robustness test applies three instruments to estimate the predicted fund ownership (*Predicted TFOF*), namely the lagged ratio of freely traded shares to total shares, the standard deviation of monthly stock returns in the prior year, and the lagged stock turnover, which are unlikely to be correlated with MAO issuance. Panel B of Table 5 presents the results of this set of additional robustness tests. Notice that the marginal effect on *Predicted TFOF* is significantly negative for the full sample and for the sub-sample of POEs, but is not significant for the sub-sample of SOEs. This suggests that our results supporting hypotheses H1 and H2 are robust to the IV estimation used to control the endogeneity issue.

[Insert Table 5 here]

4.4 Test of Hypothesis 3

To test our hypothesis H3, we further partition the sample into high and low-growth companies based on the yearly median value of the price-to-book ratio and present the results of the marginal effects of the probit models in Table 6. The marginal effect of the interaction term of *Fund*×*POE*, which captures the impact of fund ownership on the incidence of MAO, is significantly negative throughout the table for the three measures of fund ownership only among the high-growth sample and not among the low-growth sample. For instance, under the open-end fund ownership measure, the marginal effect of *Fund*×*POE* is -0.358 (*p*-value=0.06) among the high-growth firms, implying that a one-standard-deviation increase in fund ownership leads to a 4.22% decrease in the incidence of MAO. This shows the economic significance of our results and supports our hypothesis H3 that mutual funds play a significant role in reducing the incidence of MAO, particularly among high-growth entrepreneurial firms. This is because high-growth firms have a greater need for additional investment capital, and face more pressure from monitoring by external investors, which in turn increases the effectiveness of this external governance mechanism on financial reporting quality.

[Insert Table 6 here]

4.5 Robustness tests

We perform further robustness tests to strengthen the rigor of our evidence. First of all, we construct alternative fund ownership measures by scaling each type of fund ownership by total shares (i.e., the sum of freely traded and restricted shares). Mutual funds normally invest only in freely

traded shares, for liquidity reasons, and therefore their influence on the board should depend on the proportion of unrestricted shares. Consistent with our main findings, Table 7 shows that the marginal effects of *Fund*×*POE* are significantly negative across the table, indicating mutual funds' influence in reducing the number of MAOs issued to POEs. Next, we use an alternative specification of private ownership, namely the non-state ownership ratio (*NSR*), calculated as one minus the percentage of state ownership. As state ownership makes it easier for a firm to access corporate finance, we expect fund ownership to better ensure financial reporting quality among firms with less state ownership. The results reported in Table 8 show that the marginal effects of *Fund*×*NSR* are significantly negative across all regressions, which suggests that our findings are not sensitive to alternative measures of private control and thus reinforces our findings.

[Insert Tables 7 and 8 here]

We also apply the Heckman two-step regression approach to address possible selection bias stemming from the fact that mutual fund managers may choose to invest in certain firms (e.g. those without MAOs). In the first step, we estimate a probit model with a binary fund ownership dummy as the dependent variable. The inverse Mills ratio generated is then included in the second-step regression to control for sample selection bias. The untabulated results are in line with the main findings. In addition, our results are robust to the following three estimations. First, we apply firm fixed effects and random effects by following Yuan et al. (2008). Second, we control for the potential effect of International Financial Reporting Standards (IFRS) convergence in China from 2007 onward, firstly by including a control variable *POST2007*, which equals one for observations after 2007 and zero otherwise, and secondly by replicating the analysis excluding observations from 2008 onward. Third, we add additional control variables from Firth et al. (2012) including lagged *MAO*, leverage, ROA, and the quick ratio.

Finally, Chen et al. (2007) suggest that, due to the high cost of selling a large stake, institutional investors holding higher stakes in a firm could exert a greater monitoring effect. Therefore, we incorporate a dummy variable *FundTop10*, which is set to 1 if a firm has at least one mutual fund among the 10 largest shareholders and 0 otherwise, to capture the impact of fund block holders. Our prediction is that mutual funds that are among the top 10 shareholders will have a greater effect in reducing the incidence of MAO, and that the effect should be more pronounced among POEs. Our predictions are supported by the results presented in Table 9. In the analysis of the full sample, the marginal effects of both *FundTop10* and the interaction term *FundTop10×POE* are significantly negative based on the full sample and based on the sub-sample of firms with fund ownership. These findings further confirm our main findings by indicating that funds with a larger stake play a more significant monitoring role, especially among POEs.

[Insert Table 9 here]

5. Conclusions

One implication of our study is that state ownership and financial support of firms could impede the efficacy of external governance mechanisms. Prior studies show that government support and political connections are beneficial to Chinese firms, offering them competitive advantages and market benefits, which result in better firm performance (e.g., Nee, 1992; Peng and Luo, 2000; Tsang, 1998; Davies et al., 1995). However, our findings indicate that there is also a negative side to government support of Chinese listed firms. We show that it reduces mutual funds' external monitoring effect on financial reporting quality. As SOEs receive financial support from the government, they are less dependent on the capital markets and thus the monitoring role of external stakeholders is weaker. Overall, our results suggest that state ownership may lead to agency costs for

minority shareholders, which may impair the quality of financial reporting.

Another implication of our study is that external governance mechanisms tend to be more effective for privately owned entrepreneurial firms. We show that better external governance through sources such as mutual funds could enhance financial reporting quality and in turn strengthen investors' confidence and improve financial market liquidity. This is especially important for entrepreneurial firms with high growth since they are more dependent on external capital to fund their investment opportunities. Thus, our findings have important managerial and policy implications for the development of entrepreneurship finance and the capital market in China, as well as other emerging economies.

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Table 1: Definitions of variables

Variable	Description
MAO	Equals 1 for firm-year observations with modified audit opinion, and 0 otherwise
OFOF	The ratio of open-end fund ownership to freely traded shares
OFOT	The ratio of open-end fund ownership to total shares (i.e. the sum of freely traded shares and restricted shares)
CFOF	The ratio of closed-end fund ownership to freely traded shares
CFOT	The ratio of closed-end fund ownership to total shares
TFOF	The ratio of total fund ownership (i.e. the sum of open- and closed-end fund ownership) to freely traded shares
TFOT	The ratio of total fund ownership to total shares
POE	Equals 1 for privately owned enterprises, and 0 otherwise
Size	Natural logarithm of market capitalization
PB	Price-to-book ratio
ST	Equals 1 for firms under Special Treatment (i.e. two consecutive years of losses), and 0 otherwise
Foreign	The ratio of foreign shares to total shares
Analyst	The number of financial analysts following the firm
OwnCon	Herfindahl index of the 10 largest shareholders
Big4	Equals 1 if the firm is audited by a Big 4 audit firm, and 0 otherwise
Duality	Equals 1 if the CEO also holds the chair position, and 0 otherwise
Meet	The meeting frequency of the board
Bsize	The size of the board of directors
Indep	The number of independent directors relative to the total number of directors
SBsize	The size of the supervisory board

Table 2: Summary statistics

	Full Sample			***MAO* = 1**			***MAO* = 0**				
	Mean	Median	Std.Dev.	Mean	Median	Std.Dev.	Mean	Median	Std.Dev	Mean difference	
MAO	0.0938	0	0.2916	1	1	0	0	0	0		
OFOF	0.0572	0	0.1178	0.0066	0	0.0344	0.0625	0.0015	0.1221	-0.0559	***
OFOT	0.0259	0	0.0596	0.0034	0	0.0195	0.0282	0.0006	0.0619	-0.0248	***
CFOF	0.0159	0.0001	0.0418	0.0026	0	0.0167	0.0172	0.0003	0.0433	-0.0146	***
CFOT	0.0061	0	0.0161	0.0011	0	0.0071	0.0067	0.0002	0.0166	-0.0056	***
TFOF	0.0731	0.0014	0.1422	0.0092	0	0.0447	0.0797	0.0033	0.1471	-0.0705	***
TFOT	0.0321	0.0005	0.0685	0.0045	0	0.0237	0.0349	0.0012	0.071	-0.0304	***
POE	0.3336	0	0.4715	0.4883	0	0.5002	0.3176	0	0.4656	0.1707	***
Size	20.5571	20.4081	1.081	19.8654	19.7332	0.8925	20.6287	20.4706	1.0736	-0.7633	***
PB	3.4404	2.3401	3.9842	3.5914	2.0995	6.864	3.4247	2.3532	3.5558	0.1667	***
ST	0.0928	0	0.2902	0.4106	0	0.4923	0.0599	0	0.2374	0.3507	***
Foreign	0.07	0	0.2551	0.0699	0	0.2552	0.07	0	0.2551	-0.0001	
Analyst	2.8808	0	5.5943	0.4054	0	1.771	3.137	1	5.7889	-2.7316	***
OwnCon	0.1958	0.1614	0.1308	0.1512	0.1173	0.1141	0.2004	0.1675	0.1315	-0.0492	***
Big4	0.0677	0	0.2512	0.0324	0	0.1771	0.0713	0	0.2574	-0.0389	***
Duality	0.0101	0	0.0999	0.0117	0	0.1074	0.0099	0	0.0991	0.0018	***
Meet	0.5745	1	0.4944	0.5259	1	0.4997	0.5796	1	0.4937	-0.0537	***
Bsize	0.3718	0	0.4833	0.3769	0	0.4849	0.3712	0	0.4832	0.0057	**
Indep	0.8832	1	0.3211	0.8238	1	0.3812	0.8894	1	0.3137	-0.0656	***
SBsize	0.8882	1	0.3151	0.8744	1	0.3317	0.8897	1	0.3133	-0.0153	***
Obs.		8,231			722			7,459			

This table presents descriptive statistics of the variables used in our analyses. We separately report these for sub-samples of firm-year observations with and without MAO issuance. Variable definitions are given in Table 1. ***, **, and * indicate significance levels of 1%, 5%, and 10% respectively.

Table 3: Correlation analysis

Variables	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
A. *MAO*	1																			
B. *OFOF*	**-0.14**	1																		
C. *OFOT*	**-0.12**	**0.91**	1																	
D. *CFOF*	**-0.10**	**0.47**	**0.35**	1																
E. *CFOT*	**-0.10**	**0.49**	**0.46**	**0.92**	1															
F. *TFOF*	**-0.14**	**0.97**	**0.85**	**0.68**	**0.68**	1														
G. *TFOT*	**-0.13**	**0.91**	**0.98**	**0.52**	**0.63**	**0.90**	1													
H. *POE*	**0.11**	**-0.05**	**-0.03**	**-0.05**	**-0.04**	**-0.06**	**-0.04**	1												
I. *Size*	**-0.21**	**0.53**	**0.51**	**0.26**	**0.28**	**0.51**	**0.51**	**-0.15**	1											
J. *PB*	0.01	**0.18**	**0.16**	**0.03**	**0.04**	**0.16**	**0.15**	**0.09**	**0.22**	1										
K. *ST*	**0.35**	**-0.14**	**-0.13**	**-0.11**	**-0.12**	**-0.15**	**-0.14**	**0.11**	**-0.23**	**0.17**	1									
L. *Foreign*	0.00	**0.04**	0.01	**0.05**	**0.37**	**0.04**	0.02	**0.09**	0.02	0.00	-0.02	1								
M. *Analyst*	**-0.14**	**0.63**	**0.59**	**0.25**	**0.28**	**0.59**	**0.59**	**-0.04**	**0.51**	**0.05**	**-0.15**	**0.05**	1							
N. *OwnCon*	**-0.11**	**0.09**	**-0.03**	**0.12**	-0.03	**0.11**	-0.02	**-0.27**	**0.03**	**-0.06**	**-0.10**	**-0.05**	**0.10**	1						
O. *Big4*	**-0.05**	**0.15**	**0.05**	**0.16**	**0.07**	**0.17**	**0.06**	**-0.09**	**0.22**	-0.02	**-0.07**	**0.06**	**0.22**	**0.15**	1					
P. *Duality*	0.01	-0.01	0.00	-0.01	0.00	-0.01	0.00	**0.04**	-0.01	0.01	0.03	**0.03**	-0.01	**-0.04**	0.01	1				
Q. *Meet*	**-0.03**	-0.03	**-0.03**	-0.01	0.00	-0.02	-0.02	**-0.06**	**-0.06**	**-0.04**	**-0.04**	0.02	-0.03	**0.04**	**-0.05**	-0.02	1			
R. *Bsize*	0.00	**0.03**	0.00	**0.05**	0.02	**0.04**	0.00	**-0.12**	**0.03**	**-0.04**	**-0.06**	**0.05**	**0.06**	**0.04**	**0.07**	-0.01	**0.04**	1		
S. *Indep*	**-0.06**	**0.05**	**0.06**	0.01	0.03	**0.04**	**0.06**	**0.08**	**0.06**	0.02	**-0.04**	0.03	**0.05**	**-0.04**	0.01	0.01	**-0.03**	**-0.17**	1	
T. *SBsize*	-0.01	0.00	0.01	0.01	0.01	0.00	0.01	**-0.13**	**0.05**	-0.02	**-0.05**	**-0.03**	-0.01	**0.04**	0.03	0.00	-0.02	0.00	-0.02	1

This table presents the Pearson correlation matrix for the variables used in our analyses. Variable definitions are given in Table 1. Bold text indicates significance at the 5% level.

Table 4: Fund ownership and modified audit opinions (test of hypothesis H1)

Variables	Open-end fund ownership		Closed-end fund ownership		Total mutual fund ownership	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Fund	-0.178	0.014	-0.303	0.027	-0.150	0.004
POE	0.018	0.000	0.019	0.000	0.019	0.000
Size	-0.019	0.000	-0.020	0.000	-0.018	0.000
PB	-0.001	0.235	-0.001	0.227	-0.001	0.241
ST	0.202	0.000	0.207	0.000	0.202	0.000
Foreign	0.010	0.286	0.011	0.263	0.010	0.272
Analyst	-0.006	0.005	-0.007	0.000	-0.006	0.005
OwnCon	-0.120	0.000	-0.125	0.000	-0.120	0.000
Big4	0.007	0.532	0.008	0.535	0.008	0.515
Duality	-0.0200	0.252	-0.021	0.244	-0.020	0.249
Meet	-0.009	0.043	-0.009	0.051	-0.009	0.049
Bsize	0.009	0.078	0.009	0.072	0.009	0.077
Indep	-0.021	0.003	-0.021	0.003	-0.021	0.003
SBsize	0.007	0.276	0.007	0.307	0.007	0.296
Region fixed effect	Yes		Yes		Yes	
Industry fixed effect	Yes		Yes		Yes	
Pseudo R^2	0.212		0.211		0.212	
Obs.	8,231		8,231		8,231	

This table presents the results of testing Hypothesis H1 based on the marginal effects of probit regression analysis of Equation 1. Variable definitions are given in Table 1.

Table 5: Fund ownership and modified audit opinion, conditional on whether the firm is a privately owned enterprise or not (test of hypothesis H2)

Panel A: Mutual fund ownership ratio

Variables	Open-end fund ownership				Closed-end fund ownership				Total mutual fund ownership			
	Regression I		Regression II		Regression I		Regression II		Regression I		Regression II	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
Fund	-0.337	0.001	-0.083	0.227	-0.59	0.010	-0.107	0.425	-0.264	0.000	-0.061	0.225
POE	0.042	0.000	0.023	0.000	0.04	0.000	0.021	0.000	0.043	0.000	0.024	0.000
Fund×POE	-0.523	0.039	-0.338	0.035	-1.110	0.061	-0.548	0.091	-0.461	0.015	-0.284	0.015
Size	-0.037	0.000	-0.019	0.000	-0.050	0.000	-0.022	0.000	-0.037	0.000	-0.020	0.000
PB	0.002	0.006	-0.001	0.229	0.000	0.008	-0.001	0.215	0.002	0.007	-0.001	0.238
ST			0.199	0.000			0.196	0.000			0.191	0.000
Foreign			0.010	0.267			0.010	0.282			0.010	0.268
Analyst			-0.006	0.005			-0.01	0.000			-0.007	0.001
OwnCon			-0.119	0.000			-0.115	0.000			-0.109	0.000
Big4			0.008	0.521			0.010	0.397			0.010	0.384
Duality			-0.021	0.235			-0.021	0.222			-0.021	0.217
Meet			-0.009	0.042			-0.009	0.058			-0.0089	0.055
Bsize			0.008	0.082			0.011	0.024			0.010	0.029
Indep			-0.021	0.002			-0.024	0.001			-0.023	0.001
SBsize			0.007	0.288			0.010	0.137			0.009	0.139
Region fixed effect		No		Yes		No		Yes		No		Yes
Industry fixed effect		No		Yes		No		Yes		No		Yes
Pseudo R^2		0.111		0.213		0.102		0.210		0.113		0.212
Obs.		8,231		8,231		8,231		8,231		8,231		8,231

Panel B: Predicted mutual fund ownership ratio

Variables	Full sample		Listed POEs		Listed SOEs	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
POE	0.163	0.001				
Predicted TFOF	-1.985	0.035	-4.112	0.016	-1.588	0.183
Size	-0.178	0.000	-0.195	0.001	-0.167	0.002
PB	-0.003	0.593	-0.005	0.455	0.002	0.816
ST	1.011	0.000	0.903	0.000	1.047	0.000
Foreign	0.105	0.230	0.003	0.984	0.236	0.051
Analyst	-0.058	0.000	-0.110	0.001	-0.036	0.047
OwnCon	-1.048	0.000	-1.779	0.000	-0.813	0.001
Big4	0.107	0.350	0.337	0.172	0.073	0.587
Duality	-0.293	0.182	-0.277	0.285	-0.462	0.314
Meet	-0.093	0.036	-0.143	0.046	-0.057	0.330
Bsize	0.111	0.020	0.171	0.03	0.084	0.165
Indep	-0.186	0.004	-0.154	0.209	-0.209	0.006
SBsize	0.102	0.149	0.093	0.365	0.094	0.365
Region fixed effect		Yes		Yes		Yes
Industry fixed effect		Yes		Yes		Yes
Obs.		8,128		2,686		5,442

This table presents the results of testing Hypothesis H2. Panel A is based on the marginal effects of probit regression analysis of Equation 2. Panel B presents the marginal effects of probit model for predicted mutual fund ownership, based on instrumental variables including the proportion of freely traded shares in the prior year, the ratio of stock turnover to the total number of freely traded shares in the prior year, and the standard deviation of the monthly stock returns in the prior year. The sample size is reduced from 8,231 to 8,128 due to missing values of these three variables. The predicted *TFOF* is generated from the instrumental regression in the first stage and then incorporated as a regressor in the second-stage regression. Note that the R^2 is not reported when using the command "ivprobit" in STATA. Variable definitions are given in Table 1.

Table 6: Fund ownership and modified audit opinions among high and low-growth firms (test of hypothesis H3)

Variables	Open-end fund ownership				Closed-end fund ownership				Total mutual fund ownership			
	High growth		Low growth		High growth		Low growth		High growth		Low growth	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
Fund	-0.104	0.142	-0.260	0.076	-0.083	0.555	-0.518	0.080	-0.022	0.842	-0.497	0.070
POE	0.020	0.004	0.016	0.041	0.018	0.010	0.014	0.085	0.020	0.006	0.016	0.038
Fund×POE	-0.358	0.060	-0.128	0.596	-0.768	0.087	0.298	0.580	-0.559	0.049	-0.123	0.752
Size	-0.014	0.002	-0.016	0.008	-0.022	0.000	-0.015	0.002	-0.021	0.000	-0.014	0.004
PB	0.003	0.000	-0.019	0.000	0.003	0.000	-0.018	0.000	0.003	0.000	-0.017	0.000
ST	0.059	0.000	0.200	0.000	0.058	0.000	0.208	0.000	0.059	0.000	0.199	0.000
Foreign	-0.001	0.917	0.038	0.010	0.000	0.972	0.037	0.012	-0.002	0.884	0.036	0.013
Analyst	-0.005	0.010	-0.004	0.243	-0.008	0.000	-0.008	0.048	-0.007	0.002	-0.006	0.101
OwnCon	-0.108	0.000	-0.084	0.004	-0.113	0.000	-0.067	0.022	-0.116	0.000	-0.065	0.020
Big4	0.019	0.242	0.000	0.994	0.024	0.149	0.001	0.941	0.021	0.198	0.000	0.983
Duality	-0.012	0.631	-0.024	0.315	-0.013	0.611	-0.023	0.373	-0.013	0.615	-0.023	0.316
Meet	-0.010	0.091	-0.009	0.142	-0.009	0.136	-0.011	0.103	-0.010	0.114	-0.009	0.141
Bsize	0.011	0.076	0.006	0.385	0.013	0.049	0.011	0.109	0.012	0.056	0.009	0.165
Indep	-0.019	0.039	-0.017	0.084	-0.020	0.036	-0.022	0.027	-0.021	0.029	-0.022	0.022
SBsize	0.013	0.103	0.000	0.965	0.017	0.042	0.003	0.782	0.017	0.036	0.003	0.797
Region fixed effect		Yes		Yes		Yes		Yes		Yes		Yes
Industry fixed effect		Yes		Yes		Yes		Yes		Yes		Yes
Pseudo R^2		0.181		0. 321		0.176		0.309		0.175		0.314
Obs.		4,159		4,072		4,159		4,072		4,159		4,072

This table presents the results of testing Hypothesis H3 based on the marginal effects of the probit regression analysis of Equation 2 in the high and low-growth sub-samples separately. Firms are classified as high (low) growth if the market-to-book ratio is above (below) the yearly median value. Variable definitions are given in Table 1.

Table 7: Total shares as the deflator for the calculation of fund ownership (robustness test)

Variables	Open-end fund ownership				Closed-end fund ownership				Total mutual fund ownership			
	Regression I		Regression II		Regression I		Regression II		Regression I		Regression II	
	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value	Coeff.	*p*-value
Fund	0.044	0.000	0.022	0.000	0.042	0.000	0.021	0.000	0.044	0.000	0.023	0.000
POE	-0.536	0.020	-0.029	0.831	-1.256	0.021	-0.109	0.743	-0.463	0.008	-0.040	0.719
Fund×POE	-0.995	0.057	-0.594	0.062	-2.527	0.073	-1.328	0.080	-0.903	0.026	-0.531	0.032
Size	-0.042	0.000	-0.021	0.000	-0.050	0.000	-0.022	0.000	-0.041	0.000	-0.021	0.000
PB	0.002	0.006	-0.001	0.226	0.002	0.008	-0.001	0.212	0.002	0.007	-0.001	0.222
ST			0.196	0.000			0.196	0.000			0.195	0.000
Foreign			0.010	0.296			0.010	0.294			0.010	0.294
Analyst			-0.008	0.001			-0.008	0.000			-0.007	0.001
OwnCon			-0.115	0.000			-0.117	0.000			-0.115	0.000
Big4			0.009	0.447			0.010	0.433			0.009	0.442
Duality			-0.021	0.226			-0.021	0.223			-0.021	0.220
Meet			-0.009	0.044			-0.009	0.054			-0.009	0.049
Bsize			0.010	0.039			0.0106	0.029			0.010	0.037
Indep			-0.024	0.001			-0.024	0.001			-0.024	0.001
SBsize			0.010	0.112			0.010	0.127			0.010	0.119
Region fixed effect		No		Yes		No		Yes		No		Yes
Industry fixed effect		No		Yes		No		Yes		No		Yes
Pseudo R^2		0.104		0.210		0.100		0.209		0.106		0.210
Obs.		8,231		8,231		8,231		8,231		8,231		8,231

This table reports the results of robustness tests using total shares as the deflator for the calculation of fund ownership. The results are based on the marginal effects of probit model of the incidence of modified audit opinions (MAOs). Variable definitions are given in Table 1.

Table 8: Alternative specification of private ownership (robustness test)

Variables	Open-end fund ownership		Closed-end fund ownership		Total mutual fund ownership	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Fund	0.128	0.251	0.316	0.297	-0.040	0.719
NSR	0.049	0	0.045	0	0.023	0
Fund×NSR	-0.434	0.02	-0.877	0.059	-0.531	0.032
Size	-0.020	0	-0.023	0	-0.021	0
PB	-0.001	0.26	-0.001	0.29	-0.001	0.222
ST	0.201	0	0.196	0	0.194	0
Foreign	0.009	0.346	0.010	0.303	0.010	0.294
Analyst	-0.006	0.005	-0.008	0	-0.007	0.001
OwnCon	-0.093	0	-0.091	0	-0.115	0
Big4	0.007	0.576	0.010	0.389	0.009	0.442
Duality	-0.019	0.276	-0.019	0.295	-0.021	0.22
Meet	-0.010	0.031	-0.010	0.037	-0.009	0.049
Bsize	0.009	0.075	0.012	0.016	0.010	0.037
Indep	-0.021	0.002	-0.024	0.001	-0.024	0.001
SBsize	0.007	0.285	0.010	0.121	0.010	0.119
Region fixed effect	Yes		Yes		Yes	
Industry fixed effect	Yes		Yes		Yes	
Pseudo R^2	0.213		0.211		0.21	
Obs.	8,231		8,231		8,231	

This table reports the results of the robustness test using an alternative specification of private ownership. The results are based on the marginal effects of probit model of the incidence of modified audit opinions (MAOs). *NSR* denotes the proportion of non-state shares, measured as one minus the percentage of state ownership. Other variables are defined in Table 1.

Table 9: Fund stake and financial reporting quality (robustness test)

	Full Sample		*TFOF>0*	
	Coeff	p-value	Coeff	p-value
FundTop10	-0.021	0.005	-0.017	0.007
POE	0.026	0	0.028	0
FundTop10×POE	-0.027	0.006	-0.024	0.001
Size	-0.016	0	-0.007	0.052
PB	-0.001	0.173	0.002	0.039
ST	0.199	0	0.074	0.001
Foreign	0.012	0.202	0.002	0.842
Analyst	-0.006	0.002	-0.004	0.005
OwnCon	-0.117	0	-0.036	0.045
Big4	0.007	0.561	-0.015	0.099
Duality	-0.022	0.227	-0.011	0.521
Meet	-0.009	0.05	-0.008	0.057
Bsize	0.009	0.089	-0.002	0.582
Indep	-0.022	0.003	-0.017	0.021
SBsize	0.006	0.366	0.005	0.476
Region fixed effect	Yes		Yes	
Industry fixed effect	Yes		Yes	
Pseudo R^2	0.2158		0.1466	
Obs.	8231		5858	

This table reports the results of the robustness test looking at the effect of the fund stake. The results are based on the marginal effects of probit model of the incidence of modified audit opinions (MAOs). *FundTop10* is set to one if one or more mutual funds were among the 10 largest shareholders of a listed firm in the prior year, and zero otherwise. Variable definitions are given in Table 1.